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10/600,164	06/19/2003	Sudeep M. Kumar	090900-0158	9722

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EXAMINER	
TURK, NEIL N	
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1797	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/600,164	KUMAR ET AL.	
	Examiner	Art Unit	
	NEIL TURK	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8,10-23,25-27,29-40,42-58 and 62-64* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *62-64* is/are allowed.

6)☒ Claim(s) *1-6,8,10-23,25-27,29-40 and 42-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *6/19/03* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Remarks

This Office Action fully acknowledges Applicant's remarks filed on July 17th, 2008. Claims 1-6, 8, 10-23, 25-27, 29-40, 42-58, and 62-64 are pending. Claims 7, 9, 24, 28, 41, and 59-61 have been cancelled. Claims 62-64 are newly added herein. Any objection/rejection not repeated herein has been withdrawn by The Office.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6, 8, 22, 23, 37-40, 42-53, and 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niyama (5,993,740) in view of Pyke (5,591,321).

Niyama discloses an electrochemiluminescence cell and method of its use. Niyama discloses that the cell includes working electrode 15, counter electrodes 16a, 16b, window 22 and light sensor 19 (photodetector, pmt, photodiode)(abstract, lines 44-49, col. 3; lines 48-67, col. 7; col. 8; figs. 2-4). Niyama discloses that the electrodes may be made of such materials as platinum, iridium, tungsten and alloys there of such that these materials prevent wear and corrosion from reaction and reagents flowing on the electrode surfaces (lines 23-42, col. 5); Niyama shows in figures 5A-F forms of models including a magnetic particle 40 (trapped in the chamber by way of a magnet over the working electrode, lines 62-67 col. 4), first reagent 44, TSH 47 as the analyte in the sample, second reagent 48, reaction product 54 and TPA as the attractant in the buffer solution. Niyama also discloses that TPA (tripropylamine) is the attractant contained in the buffer solution, which is reduced upon application of a voltage so as to excite the label material and has a pH of about 7.4, and additionally the second reagent 48 has fixed to $Ru(bpy)_3$ (ruthenium-tris-bipyridine) as the label material (lines 44-48, col. 7; lines 65-67, col. 11; lines 1-13, col. 12, fig 5A-F).

Niyama does not disclose a working electrode or counter electrode that comprises a platinum alloy with a second element other than platinum or rhodium having a 5 to 50 (and also 10 to 30%) weight percent, nor an iridium alloy with a second element from 5 to 50% weight percent.

Pyke discloses a sensor electrode of a Pt/Ir alloy, consisting of 5 to 90% iridium, as well as Pt30Ir (30% iridium) (lines 4-12, col. 11). Examiner asserts Pyke thereby disclsoses both a Pt alloy with an amount of iridium from 5 to 50% weight percent, as well as 10 to 30%, and an Ir alloy with an amount of platinum from 5 to 50%. Further, Pyke recites the percentages as atomic weights, and Examiner asserts such that Pt (AW: 195) and Ir (AW: 192) (within around 1% of each other) the converted weight percentages will still result in the necessary compositions as required by the claims.

It would have been obvious to modify Niyama to include an Pt/Ir alloy electrode containing, for example, 30% iridium, as well as an Ir/Pt alloy with 5 to 50% platinum, as taught by Pyke such that Niyama discloses the use of Pt/Ir and Ir/Pt alloy electrodes and this would provide Niyama with a known composition of Pt/Ir and Ir/Pt alloy electrodes, as well as providing electrodes that are resistant to corrosion and wear as desired by Niyama.

Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niyama in view of Chang et al. (5,973,443), hereafter Chang.

Niyama has been discussed above.

Niyama does not disclose a working or counter electrode comprised of a rhodium alloy, with a first weight percent of rhodium and a second weight percent of an element other than rhodium or platinum.

Chang discloses an iridium-rhodium electrode used to minimize erosion and wear resistance, where the rhodium may be greater than 30 weight percent and less than 60 weight percent in the iridium. Examiner asserts such a disclosure points to a rhodium alloy, in which there is a second element (iridium) between 5 and 50%.

It would have been obvious to modify Niyama to include a working or counter electrode of a rhodium-iridium alloy, in which the iridium constitutes 5 to 50% of the alloy, such as taught by Chang in order to supply Niyama with a known electrode alloy composition and further to provide Niyama with a noble metal electrode alloy so as to provide the desired resistance to corrosion and wear, as desired and discussed in Niyama. Examiner asserts that Chang discloses a known electrode composition, of noble metals, which analogously provides the property of resistance to corrosion and wear, as disclosed and desired by Niyama.

Claims 10-19, 25-27, and 29-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niyama in view of Pyke as applied to claims 1-6, 8, 22, 23, 37-40, 42-53, and 56-58 above and in further view of Wohlstadter (6,207,369).

Niyama/Pyke does not disclose that the support for the counter electrode is transparent and that the counter electrode is not a mesh or a screen, and includes a

field extending element (further, as a ladder electrode or projections forming an interdigiated array) that traverses the transparent portion.

Wohlstadter discloses an electrochemiluminescent cell and method of its use. Wohlstadter also discloses that commercial ECL assays are performed using a flow cell with a working and counter electrode. Wohlstadter also discloses the use of a waveform generator/potentiostat as a source of electrical energy (lines 4-12, col. 12). Wohlstadter discloses that the cell may have electrodes with field extending structures as shown in figures 6b and 19a-e, and such combinations provide for a constant electric field and supports for the electrodes may be of any material, including transparent materials (lines 1-10, col. 44; col. 42-44). Examiner asserts that such an electrode as disclosed and shown in figures 6b, and 19a,e by Wohlstadter constitutes a ladder electrode and projections forming an interdigitated array by Applicant's definition given in paragraphs 0093 and 0096 of the pre-grant publication (2004/0090168). Examiner further asserts that claim 25's current recitation does not require any reduction of the electrochemiluminescence incident upon the transparent parent, as the recitation,"...reduces...by less than 50%" reads on 0%, which Wohlstadter at least discloses, given the recited field extending element.

It would have been obvious to modify the Niyama/Pyke device to include a transparent support and a counter electrode with a field extending element not of a mesh or screen (and also a a ladder electrode and projections that form an interdigitated array) that transverses the transparent portion of the support such as taught by Wohlstadter in order to provide a counter electrode that provides a constant

electric field and selective transmittance of the generated electrochemiluminescence to the detector and selectively blocks light incident to the detector, and a support of a suitable material to allow light through to observe/detect reactions by optical means.

Claims 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niyama in view of Crane (3,784,928).

Niyama has been discussed above.

Niyama does not disclose a working or counter electrode comprised of a rhodium alloy, with a first weight percent of rhodium and a second weight percent of an element other than rhodium (and specifically, platinum, as recited in claim 55) from 5 to 50%.

Crane discloses rhodium-platinum alloys as material for anode and cathode electrodes, in which the Rh-Pt alloy electrodes may include 1 to 100 weight percent rhodium (lines 25-47, col. 4).

It would have been obvious to modify Niyama to include a working or counter electrode of a rhodium-platinum alloy, in which the platinum constitutes 5 to 50% of the alloy, such as taught by Crane in order to supply Niyama with a known electrode alloy composition and further to provide Niyama with a noble metal electrode alloy so as to provide the desired resistance to corrosion and wear, as desired and discussed in Niyama.

Claims 1-6, 8, 10-19, 22, 23, 25-27, 30-40, 42-53, and 56-58 are rejected under 35 U.S.C. 103(a) as being obvious over Liljestrand (6,200,531) in view of Niyama and in view of Pyke and in view of Kovacs (5,965,452).

Liljestrand discloses an apparatus for carrying out electrochemiluminescence test measurements. Liljestrand discloses that the prior art includes a flow cell (US Patent No. 5,466,416) that comprises a counter electrode 26, ECL test chamber 28, working electrode 30, transparent 32, and the flow cell 18 includes a main housing 48 formed of a transparent, chemically inert material. Liljestrand also discloses that working electrode 30, counter electrode 26, and counter electrode 34 may consist of electrically-conductive materials such as platinum (lines 7-10, col. 2, fig. 1&2). Liljestrand further discloses that counter electrode 26 is affixed to a side of transparent block 32. Liljestrand discloses that the counter electrode 136 may comprise a mesh or a screen and counter electrode 136 is shaped to fit a counter electrode groove in component 134 and may be "L" shaped or "T" shaped advantageously such that one "arm" of the configuration may be positioned to extend beyond component 142 to provide the provision of electrical energy (lines 58-67, col. 12; lines 1-5, col. 13). Liljestrand also discloses reference electrode 128 is an ECL reference electrode for detecting the voltage level of an assay sample (lines 23-36, col. 12). Liljestrand further discloses that the invention may also include a photodetector, e.g. a photodiode, in optical registration with the electrically-shielded window, the transparent portion of the cell wall and the working electrode (lines 33-36, col. 5). Liljestrand also discloses that a removable magnet is provided for applying a magnetic field to the working electrode (lines 37-42,

col. 5). Liljestrand further discloses that registration of working electrode 140, opening 137, opening 133 (of the counter electrode 136), transparent base 127, aperture 125, conductive window 124, optical filter 123 and light detector 122 is necessary in order to provide optimal transmittance of light from the working electrode to the light detector, and opening 133 functions as an optical element the defines the electrochemiluminescence that may propagate to the light detector. Liljestrand also discloses that the counter electrode may be designed to block undesired light generated in certain regions (lines 41-67, col. 14, fig. 3a). Liljestrand also discloses that electrical energy is supplied to flow cell 120 through working electrode 140 and counter electrode 136 by application of main controller 214 (waveform generator/potentiostat included in main controller 214) to cause the input fluid to electrochemiluminescence (lines 39-42, col. 17; lines 15-23, col. 18).

Liljestrand does not disclose a working electrode or counter electrode that comprises a platinum alloy with a second element other than platinum or rhodium having a 5 to 50 (and also 10 to 30%) weight percent, nor an iridium alloy with a second element (and specifically, platinum) from 5 to 50% weight percent.

Liljestrand also does not disclose a counter electrode with a field extending element, where the counter electrode is not a mesh or screen and the field extending element is a ladder electrode.

Niyama and Pyke have been discussed above.

Kovacs discloses a biological electrode array in which in an embodiment for incorporating optical fluorescence or transmittance detection circuitry into the electrode

matrix 12 it is desirable to provide a slitted or punctuated electrode structure, such as that shown in figure 8(b). Examiner asserts that such an electrode as disclosed and shown in figure 8b by Kovacs constitutes a ladder electrode by Applicant's definition given in paragraph 0096 of the pre-grant publication (2004/0090168). Orifices 56 allow the passage of light through the electrode 52 to the optical detector 50, thus eliminating the need for an external camera and reducing the analysis system cost (lines 30-65, col. 8, fig. 8b). Examiner asserts that claim 25's current recitation does not require any reduction of the electrochemiluminescence incident upon the transparent parent, as the recitation,"…reduces…by less than 50%" reads on 0%, which Kovacs at least discloses, given the recited field extending element.

It would have been obvious to modify Liljestrand to include an Pt/Ir alloy electrode containing, for example, 30% iridium, as well as an Ir/Pt alloy with 5 to 50% platinum, as taught by Pyke in order to provide known compositions of Pt/Ir and Ir/Pt alloy electrodes, so as to provide electrodes that are resistant to corrosion and wear as taught by Niyama, whose disclosure analogously noble metal alloy electrodes and teaches use of such in electrochemiluminescent systems.

It would have been obvious to modify Liljestrand to include a field extending element that is not a mesh or screen such as taught by Kovacs in order to provide a design to the counter electrode which provides selective transmittance of the generated electrochemiluminescence to the detector and selectively blocks light incident to the detector.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liljestrand in view of Niyama and in view of Pyke and in view of Kovacs as applied to claims 1-6, 8, 10-19, 22, 23, 25-27, 30-40, 42-53, and 56-58 above and in further view of Wohlstadter.

Liljestrand/Niyama/Pyke/Kovacs does not specifically disclose that the field extending element comprises projections that form an interdigitated array.

Wohlstadter has been discussed above.

It would have been obvious to modify Liljestrand/Niyama/Pyke/Kovacs to include a field extending element compried of projections that form an interdigitated array such as taught by Wohlstadter in order to provide another structural form of a field extending element that provides selective transmittance of the generated electrochemiluminescence to the detector and selectively blocks light incident to the detector, while also providing a constant electric field.

Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liljestrand in view of Chang.

Liljestrand and Chang have been discussed above.

It would have been obvious to modify Liljestrand to include a working or counter electrode of a rhodium-iridium alloy, in which the iridium constitutes 5 to 50% of the alloy, such as taught by Chang in order to supply Liljestrand with a known electrode alloy composition with a noble metal electrode alloy so as to provide the desired resistance to corrosion and wear.

Claims 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liljestrand in view of Crane.

Liljestrand and Crane have been discussed above.

Liljestrand does not disclose a working or counter electrode comprised of a rhodium alloy, with a first weight percent of rhodium and a second weight percent of an element other than rhodium (and specifically, platinum, as recited in claim 55) from 5 to 50%.

It would have been obvious to modify Liljestrand to include a working or counter electrode of a rhodium-platinum alloy, in which the platinum constitutes 5 to 50% of the alloy, such as taught by Crane in order to supply Liljestrand with a known electrode alloy composition of noble metals so as to provide an electrode alloy resistant to corrosion and wear.

Allowable Subject Matter

Claims 62-64 are allowed.

The following is an examiner's statement of reasons for allowance: the prior art of record does not teach or fairly suggest the electrochemiluminescent cells of claims 62-64 with the specific electrode alloy compositions recited. This subject matter is further seen to be allowable in view of the unexpected results shown over the prior art of record for the specific electrode alloy compositions of claims 62-64.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

Applicant's arguments filed July 17th, 2008 have been fully considered but they are not persuasive.

With regard to all of the pending claims (1-6, 8, 10-23, 25-27, 29-40, and 42-58) being rejected under 35 USC 103(a) as discussed above in the body of the Action, Applicant traverses the rejections. Applicant argues that evidence has been submitted that shows unexpected results with respect to the alloy compositions of the claims.

Examiner argues that Applicant's evidence of unexpected results is not commensurate in scope with the claims. Examiner argues that Applicant has not submitted probative evidence with respect to the multitude of alloy combinations currently claimed.

Examiner agrees that unexpected results have been shown relative to the Pt-10%Ir alloy, which is now **newly claimed in claim 62**. Examiner further notes that the photographs provided by Applicant to show the relative etching between Pt and Pt-10%Ir counter and working electrodes are not clearly seen, and Applicant should, in further submissions, provide such photographs in a Supplemental Evidence submission that may be more clearly seen.

However, Applicant has not supplied actual evidence of the pure element (i.e. platinum, iridium, and rhodium) versus the various alloy compositions and different ranges recited in claims 1-6, 8, 10-23, 25-27, 29-40, and 42-58. Examiner asserts that no evidence has been provided so as to show unexpected results in view of the multitude of combinations of elements (in most cases including the entire periodic table as possible alloying elements) and wide percentage range of the alloyed compositions. Examiner notes that if Applicant wishes to show unexpected results and be enabled for all such combinations at the various percentage ranges, Applicant must show all the combinations and more than one point within the wide ranges claimed so as to show the unexpected results that would arise within the entire claimed range for the various different alloys.

Examiner also agrees that the evidence provided by Example V of Applicant's specification as well as figures 12A-C, and figure **15 show unexpected results with respect to new claims 63 and 64** with respect to Pt-30%Ir and Pt-20%Rh alloy electrodes, respectively.

With regards to claims 1-6, 8, 22, 23, 37-40, 42-53, and 56-58 rejected under 35 USC 103(a) over Niyama in view of Pike, Applicant traverses the rejection.

Applicant argues that Pyke relates to a fault-detector having a Pt/Ir sensor, And Niyama does not disclose this element at all and the language of Niyama does not include any broadening language to include anything outside of the those metals and alloys thereof listed. Examiner argues that Pyke discloses the use of Pt/Ir alloy as a material of construction of an electrode (lines 4-12, col. 11). Further, Examiner asserts

that Niyama discloses that the reason for choosing any such material is to prevent wear and corrosion of the electrode surface (lines 21-29, col. 4). Examiner asserts that one of ordinary skill in the art, in reading Niyama, would understand that materials outside of the group listed in Niyama would be permissible to modify such a device, as long as such materials provide the desired effect of preventing wear and corrosion to the electrode surface. Examiner asserts the prior art of Pyke discloses an electrode of such a material contemplated by Niyama, which focuses on the use of noble metal alloys for the purpose of preventing wear and corrosion to the electrode surface. As irridium is a material resistant to wear and corrosion as desired by Niyama, as well as being a noble metal, alloying platinum with irridium(or any other material resistant to wear and corrosion) is seen as an obvious modification to one of ordinary skill in the art. Further, additional modifications with respect to noble metal alloys with other noble metals or metals that provide resistance to corrosion, will be seen as obvious alloy compositions to try for the same desired purpose of preventing corrosion in the device. Examiner asserts that Applicant may supply evidence that points to a criticality of such alloy compositions that renders such modifications unobvious, or supply evidence which shows unexpected results arise when the alloys are chosen.

With regards to claims 20 and 21 rejected under 35 USC 103(a) over Niyama in view of Chang, Applicant traverses the rejection.

Applicant argues that Chang relates to a spark plug electrode and is entirely distinct from an electrode used in a flow cell to measure ECL.

Examiner argues that Chang discloses a noble metal alloy, as contemplated by Niyama, for the purpose of minimizing erosion, as similarly desired by Niyama, and thereby such an alloy combination would have been obvious to one of ordinary skill in the art to try as an noble metal alloy composition for minimizing erosion. Examiner asserts that Applicant may supply evidence that points to a criticality of such alloy compositions that renders such modifications unobvious, or supply evidence which shows unexpected results arise when the alloys are chosen.

With regards to claims 10-19, 25-27, and 29-36 rejected under 35 USC 103(a) as being rejected over Niyama in view of Pyke and Wohlstadter, Applicant traverses the rejection.

Applicant argues that the combination of Niyama with Pyke and Wohlstader into the subject matter of claim 22 would require still further modification and such modificationis taught only by the Applicant's own disclosure. Examiner asserts that, as discussed above, there is no such deficiency with respect to the rejection of claim 22. Further, the combination of Niyama, Pyke, and Wohlstadter is seen as an obvious modification as discussed above for the purpose of providing a constant electric fiel and selective transmittance of the generated electrochemiluminescence to the detector, as well as selectively blocking light incident to the detector. The combination further provides the added benefit of a support of suitable material to allow light through to observe/detect reactions by optical means.

With regard to claim 31, Applicant argues that Wohlstadter does not disclose a waveform generator/potentiostat that is "capable of maintaining said counter electrode at a substantially constant ground potential or at a potential that does not vary relative to a potential of said light detector". Examiner argues that as Applicant has not provided any additional structural elements with respect to the waveform generator/potentiostat for accomplishing such a functionality, the prior art of Wohlstadter, which discloses the structural element of a waveform generator/potentiostat, is said to be capable of such a functionality.

With regards to claims 54 and 55 rejected under 35 USC 103(a) as being unpatentable over Niyama in view of Crane, Applicant traverses the rejection.

Applicant argues that the combination of Niyama and Crane would involve hindsight using the Applicant's own disclosure.

Examiner argues that, as similarly discussed above, Crane discloses a noble metal alloy as rhodium-platinum alloys for anodes and cathodes, and thereby provides a known noble metal alloy electrode composition which would similarly provide the benefit disclosed in Niyama of preventing wear and corrosion. Thereby, it would have been obvious to combine Niyama in view of Crane to try the various Rh-Pt alloy compositions for the purpose of providing the corrosion prevention within the device.

With regard to claims 1-6, 8, 10-19, 22, 23, 25-27, 30-40, 42-53, and 56-58

rejected under 35 USC 103(a) over Liljestrand in view of Niyama, Pyke, and Kovacs, Applicant traverses the rejection.

Applicant argues that independent claims 1, 22, 25, 31, 37, and 56 have been amended to recite a combination of subject matter that Applicants believe is patentable in view of the cited references (as previously described). The Applicants submit that claims 1 and 22 are also patentable over the combination of Niyama, Pyke, and Liljestrand for the same reasons. Examiner applies the same such arguments as those presented above with respect to Niyama, Pyke, and Liljestrand and further argues that Applicant has not provided arguments directed to how the claimed subject matter differs from that of the primary reference to Liljestrand and to those of the combined references of Niyama, Pyke, and Kovacs. As such, Applicant's arguments are not persuasive in showing the patentably distinct subject matter over the cited references and the rejection is maintained as discussed above in the body of the Action.

Notes

Examiner notes that as Applicant has provided probative evidence to unexpected results for Pt-10%Ir, Pt-20%Ir, and Pt-30%Ir through Applicant's specification. Thereby, Examiner notes that if Applicant were to amend claim 1 to include a platinum electrode that is alloyed with Ir in the range of 10-30% weight percent, such an independent claim, and any subsequent depending claims, would be found allowable based on the evidence of unexpected results shown against the prior art.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NEIL TURK whose telephone number is (571)272-8914. The examiner can normally be reached on M-F, 9-630.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NT

/Jill Warden/
Supervisory Patent Examiner, Art Unit 1797